

WHAT IS CLAIMED IS:

1. An integrated heat dissipating device having a curved fins,
comprising:

a heat sink, having a thermal conductive block embedded therein and a
5 through hole exposing the thermal conductive block from a top surface of the
heat sink;

a first set of fins including a plurality of horizontally extending fins
stacked with each other along a vertical direction over the heat sink;

a second set of fins integrated by a plurality of vertically extending fins
10 arranged in a curved shape between the heat sink and the first set of fins; and

at least one heat pipe comprising a vertical extension across the first set of
fins and a horizontal extension underneath a bottom of the first set of fins, the
horizontal extension being inserted into the through hole in contact with the
thermal conductive block.

15 2. The device of Claim 1, wherein the heat sink includes a planar
structure with a bottom surface partially recessed for form a receiving slot
aligned with the through hole for embedding the thermal conductive block.

3. The device of Claim 1, wherein the thermal conductive block has a
thermal conducting coefficient larger than that of the heat sink.

20 4. The device of Claim 1, further comprising a third set of fins
mounted between the heat sink and the first set of vertically extending fins,
wherein the second and third sets of fins are disposed at two opposing sides of
the through hole.

5. The device of Claim 1, wherein the heat pipe has an L shape.

25 6. The device of Claim 1, wherein the heat pipe further comprises a
bending portion interconnecting the vertical extension and the horizontal
extension.

7. The device of Claim 1, further comprising a fan mounted to a first side surface of the heat dissipating device.

8. The device of Claim 7, further comprising a wind mask fitting over the first, second and third sets of fins for mounting the fan to the first side
5 surface.

9. The device of Claim 8, wherein the wind mask covers a top surface and two opposing surfaces perpendicular to the first side surface of the heat dissipating device.

10. A heat dissipating device, comprising:
10 a heat sink, having a thermal conductive block embedded therein and a through hole exposing the thermal conductive block from a top surface of the heat sink;
a first set of fins stacked with each other along a vertical direction over the heat sink;
15 a second set of fins integrated by a plurality of vertically extending fins disposed between the heat sink and the first set of fins at a first side of the through hole;
a third set of fins integrated by a plurality of vertically extending fins disposed between the heat sink and the first set of fins at a second side of the
20 through hole, wherein the second side is opposite to the first side; and
at least one heat pipe comprising a vertical extension across the first set of fins and a horizontal extension underneath a bottom of the first set of fins, the horizontal extension being inserted into the through hole in contact with the thermal conductive block.

25 11. The device according to Claim 10, further comprising a fan operative to generate wind along a direction parallel to each fin of the first set of fins.

12. The device of Claim 10, wherein the heat sink includes a planar structure with a bottom surface partially recessed for form a receiving slot aligned with the through hole for embedding the thermal conductive block

13. The device according to Claim 11, further comprising a wind mask
5 covering two side surfaces of the heat dissipating device parallel to the wind direction.

14. The device according to Claim 10, wherein the second set of fins is curved.

15. The device of Claim 10, wherein the thermal conductive block has a
10 thermal conducting coefficient larger than that of the heat sink.

16. The device of Claim 10, wherein the heat pipe has an L shape.